

## REMARKS

The Office Action mailed May 3, 2006 has been reviewed and carefully considered.

Claims 1 and 8 have been amended. Claims 1-11 are pending with claims 2-5 being withdrawn. Reconsideration of the claims in view of the remarks provided herein below and withdrawal of the present rejections are respectfully requested.

In paragraph 4 on page 2 of the Office Action, claims 1 and 11 were rejected under § 102(b) as being anticipated by Gill '890. In paragraph 6 on page 3 of the Office Action, claims 6 and 7 were rejected under § 103(a) as being unpatentable over Gill '890 in view of Gill '997. In paragraph 7 on page 4 of the Office Action, claims 8, 9 and 10 were rejected under § 103(a) as being unpatentable over Gill '890 in view of Mauri.

Applicants respectfully traverse the rejections, but in the interest of expediting prosecution have amended claims 1 and 8 to more specifically distinguish the invention over the cited references.

Independent claim 1 recites forming a first pinned layer with a top surface, bottom surface and sides orthogonal to the top and bottom surface and having a first magnetic orientation and a first width, forming a second pinned layer with sides orthogonal to the top and bottom surface of the first pinned layer and having a second magnetic orientation anti-parallel to the first magnetic orientation and a second width, forming a sensing layer with sides orthogonal to the top and bottom surface of the first pinned layer and having a third width smaller than the first width and forming a spacer layer with sides orthogonal to the top and bottom surface of the first pinned layer and having a width equal to the second width, wherein the third width is selected to coincide with a predetermined track width, the first width being selected to be wider than the predetermined track width.

In contrast, Gill '890 does not disclose, teach or suggest forming any layer with sides orthogonal to the top or bottom surface. In fact, Gill '890 teaches away from forming a layer with sides orthogonal to the top or bottom surface by disclosing sloping sides as admitted by the Office Action.

In addition, Gill '890 fails to disclose, teach or suggest forming a sensing layer with sides orthogonal to the top and bottom surface of the first pinned layer and having a third width smaller than the first width and forming a spacer layer with sides orthogonal to the top and bottom surface of the first pinned layer and having a width equal to the second width. Rather, Gill '890 discloses the spacer having a width smaller than the second width due to the slope on the outer edge surfaces of all of the layers.

Moreover, Gill '890 fails to disclose, teach or suggest that the third width of the sensing layer is selected to coincide with a predetermined track width or that the first width is selected to be wider than the predetermined track width. In fact Gill '890 fails to disclose, teach or suggest the relationship of the layer widths to a track width.

Accordingly, Applicants respectfully submit that independent claim 1 is patentable over Gill '890.

Gill '997 fails to overcome the deficiencies of Gill '890. Gill '997 is merely cited as suggesting a bias layer having a magnetic orientation anti-parallel to the free layer. However, Gill '997 fails to suggest the elements discussed in detail above relative to Gill '890.

Accordingly, Applicants respectfully submit that independent claim 1 is patentable over Gill '890 and Gill '997, alone or in combination.

Mauri fails to overcome the deficiencies of Gill '890 and Gill '997. Mauri is merely cited as showing a spin valve having all of the layers with equal lengths. However, Mauri fails to suggest the elements discussed in detail above relative to Gill '890.

Accordingly, Applicants respectfully submit that independent claim 1 is patentable over Gill '890, Gill '997 and Mauri, alone or in combination.

Dependent claims 6-11 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claim 1. Further dependent claims 6-11 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 6-11 are patentable over the cited references.

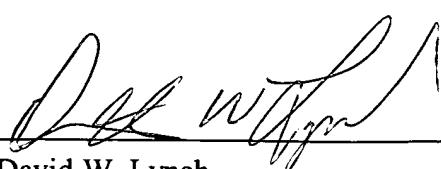
Moreover, Applicants respectfully submit that dependent claims 2-5 depend from claim 1 which is an allowable generic claim and therefore the withdrawal of claims 2-5 should be rescinded.

On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 423-757-0264.

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